EXHIBITS

TO ACCOMPANY

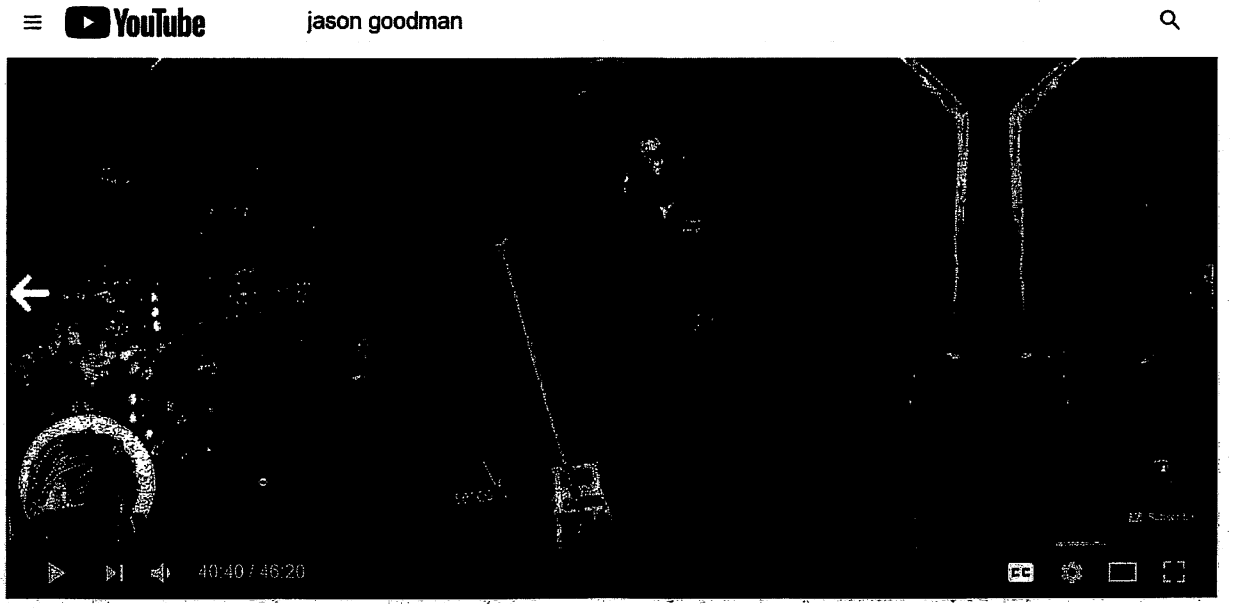
MEMORANDUM OF LAW AND ARGUMENT

I certify that all of the following exhibits are truthful reproductions and not submitted for any other purpose than for adjudication of the claims contained within. This certification is provided under the penalties of perjury on the 26th day of April 2019.

Respectfully submitted,

Pro Se Party D. George Sweigert, c/o
P.O. Box 152
Mesa, AZ 85211
Spoliation-notice@mailbox.org

EXHIBIT ONE



Are EVL Teachers Hiring CAI Scrubs To Hide Signals From High Value Target & Death Pool Crime Scenes?

Jason Goodman

✓ Subscribed 81K

747 views

Add to Share ••• More

73 10

Streamed live 50 minutes ago

David explores the connections between various private equity firms, military contractors and clandestine agencies. Fireman John joins us to share his professional insights with regard to suspicious fires at HVT sites around the world.

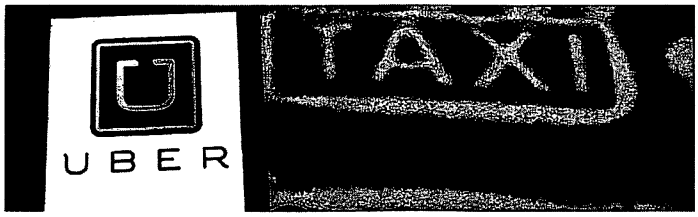
Streamed live 50 minutes ago
David explores the connections between various private equity firms, military contractors and clandestine agencies. Fireman John joins us to share his professional insights with regard to suspicious fires at HVT sites around the world.

Internet URL: https://www.youtube.com/watch?v=_PIefLyHiE8

EXHIBIT TWO

KELLY 225: SERCO'S PATENTEE UBER PSYCHO SHOOTER, CLINTON'S CON AIR WAGERING BUCK, DR. DREW'S CRIME SCENE BRIDGE

February 25, 2018 | Site Admin |



General John F. Kelly
White House Chief of Staff
Washington, D.C. 20528

Please accept Brief 225 from Field McConnell – United States Marine Corps whistle-blower and Global Operations Director of Abel Danger (AD) – on Serco's CAI private equity investors including the late General Alexander Haig, 7th SACEUR and former director of Interneuron Pharmaceuticals, MGM Mirage, AOL and UTC and Yves Fortier, Rhodes Scholar and former Nortel director, who allegedly arranged finance for the 2010/11 start-up of Uber to develop a patentee SWAT team murder-for-hire service where, for example, Serco allegedly used Uber's *System event analyzer and outlier visualization US 9794158* with Motorola's *Remote control and location system US6148196A* and patented psychotropic drugs from Shire Plc to deploy a homicidally-ideated Nikolas Cruz with an AR-15-style rifle and multiple magazines of ammunition in an Uber vehicle to his former high school for a body count of 17 victims in a Valentine's Day massacre on February 14, 2018.

McConnell claims that Haig and Fortier used Kristine Marcy, McConnell's sister and the founder of a USMS prisoner medical services program, the U.S. Senior Executive Service (SES) and Con Air (JPATS), and Oliver 'Buck' Revell, former Marine Corps Captain, former FBI Executive Director – Investigations (SES-6), to track targets at staged mass-casualty events such as 9/11 or the Valentine's Day massacre of February 14, 2018 with Imagis Technologies' face-recognition software allegedly used by the Greek Life associates of Bill Clinton (Phi Beta Kappa) and Wilbur Ross (Kappa Beta Phi) to bet on mass-casualty body counts with Howard Lutnick's *Real-time interactive wagering on event outcomes CA 2460367 A.*

McConnell reminds you that Buck Revell (warned by Serco's Rothschild bankers?) is reported to have pulled his son and daughter-in-law off Pan Am Flight 103 just before takeoff from London's Heathrow airport at 18:25 hours on 21 December 1988 (after McConnell told his Conair sister how to handle a prisoner mutiny by droning the aircraft) and saved them from a **SMEAC*** bombing event over Lockerbie, Scotland at 19:02:50 with its body count of 270 = 243 passengers + 16 crew + 11 people on ground.

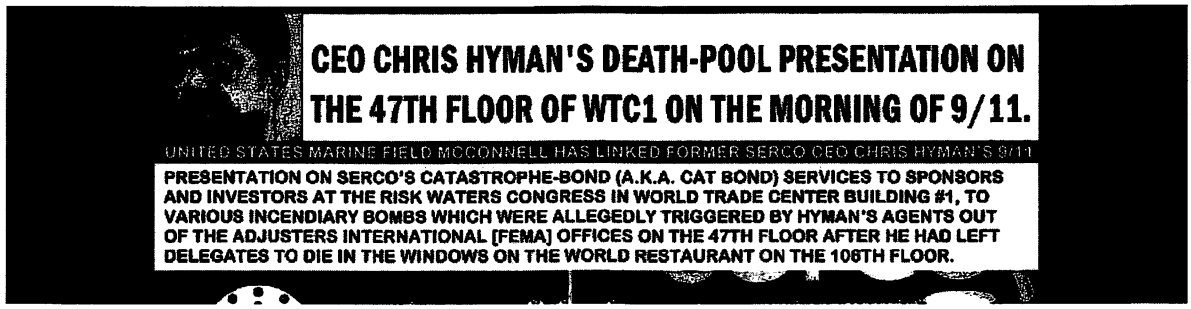
*Serco's digital fires instructors at USMC Base Camp Pendleton have allegedly corrupted the Marine Corps SMEAC briefing protocols into Situation, Mission, Execution, Ambush, Cover-up!

Internet URL: https://www.abeldanger.org/kelly-225-sercos-patentee-uber-psycho-shooter-clintons

EXHIBIT THREE

Apr 13 at 5:10pm

Are Serco's AI Agents Scrubbing Assange's Secret Service Tunnels? —Are Clinton's EVL Teachers Using Eduroam's Starnet Child Porn Split?: With David Hawkins Discovery CSI



With nearly 40 years' experience as an AI mentor, I have used my Reverse CSI Storyboards to identify the Serco shareholders—including an EVL-network of AI Teachers—Resilience agents and investment banker N M Rothschild & Sons Ltd., with custody of Con Air AI patented devices apparently used by Serco cut-out agents including Kevin "Mendenhall" Marsden and the social engineer/ethical hacker David Sweigert to scrub tunnels under the federal bridge certification authority network and prevent Julian Assange as a whistleblower and the United States Secret Service from exposing the Clintons' alleged use of the BBC/EVL Teachers' Eduroam networks to split data needed to solve cases of Starnet child pornography, dead pool betting, network intrusions, IP crimes and murder-for-hire between...

The story boards indicate that Serco agent Sweigert and Maxar Technologies director Joanne Isham, formerly responsible to Clinton's disgraced CIA Director John Deutsch for clandestine technical activities with the UK MOD over the federal bridge certification authority, equipped BBC scriptwriters and the EVL AI Teachers community with split-tunnel networks to prevent the Secret Service from investigating CAI special investors such as David Johnston, former Governor General of Canada and the only non-American citizen to chair the Harvard Board of Overseers, and the late General Alexander Haig former SACEUR and former director of MGM Mirage, who allegedly conspired with Bernardine Dohrn and Bill Ayers to complete on 9/11 what they started in the 1970s.

The storyboards indicate that Serco and CAI investors used Maxar and Sweigert to split tunnels for B.C.'s Piggy Palace Good Times Society and Starnet Communications and conceal Con Air pig-farm snuff film, child porn, blackmail, money laundering and dead-pool operations to help the BBC's EVL Teachers' friends including Obamas, Clintons, Dohrn & Ayers to spin Bin Laden propaganda through 9/11.

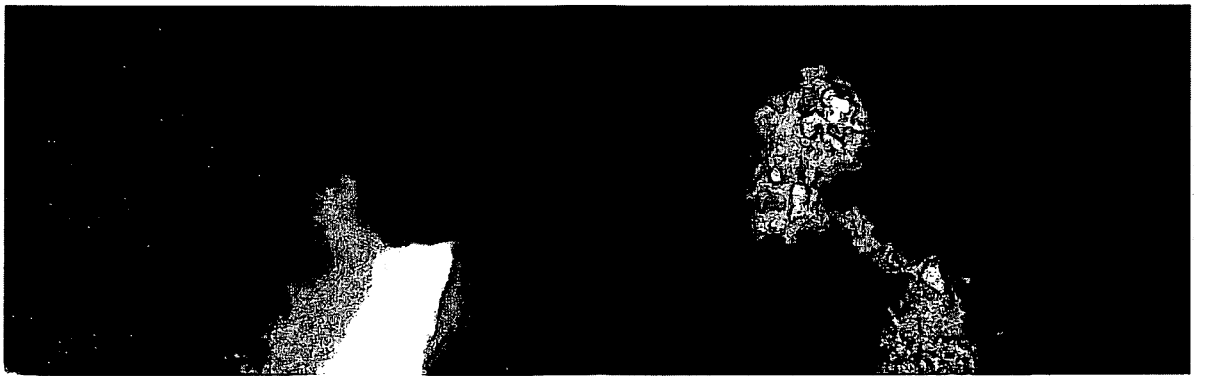
The storyboards suggest that Serco/CAI agents are using BBC scripts and Sweigert's split-tunnelling skills to break the chains of custody of evidence needed by the Secret Service to investigate cases of missing and exploited children (JonBenet Ramsey, Madeleine McCann!) and dismantle a patent-for-rent murder-for-hire network run by EVL Teachers who appear to have staged pig-farm raves between '96 and '01 where victims were shot with patented biological bullets before a spot-fixed dead-pool tortured death.

Internet URL: https://www.patreon.com/posts/are-sercos-ai-26081365

EXHIBIT FOUR

Apr 18 at 4:17pm

Al Serco's WTC, Deepwater Notre Dame Patents—EVL Teachers Dead Pool—CAI Sweigert's Con Air Scrubbing Tunnels: With David Hawkins Discovery CSI



The storyboards indicate that CAI investors hired social engineer/ethical hacker David "Scrubberman" Sweigert and Maxar Technologies director Joanne Isham, formerly responsible to Clinton's disgraced CIA Director John Deutsch for clandestine technical activities with the UK MOD over the federal bridge certification authority, to equip BBC scriptwriters and the EVL Al Teachers community with split-tunnel networks to prevent the U.S. Secret Service from investigating dead-pool gaming and an attempt by Serco/CAI agents to complete on 9/11 what Bernardine Dohrn and Bill Ayers started in the 1970s.

The storyboards indicate that Serco and CAI investors used Maxar and Sweigert to split tunnels for B.C.'s Piggy Palace Good Times Society and Starnet Communications and conceal Con Air pig-farm snuff film, child porn, blackmail, money laundering and dead-pool operations to help the BBC's EVL Teachers' friends including Obamas, Clintons, Dohrn & Ayers to spin Bin Laden propaganda through 9/11.

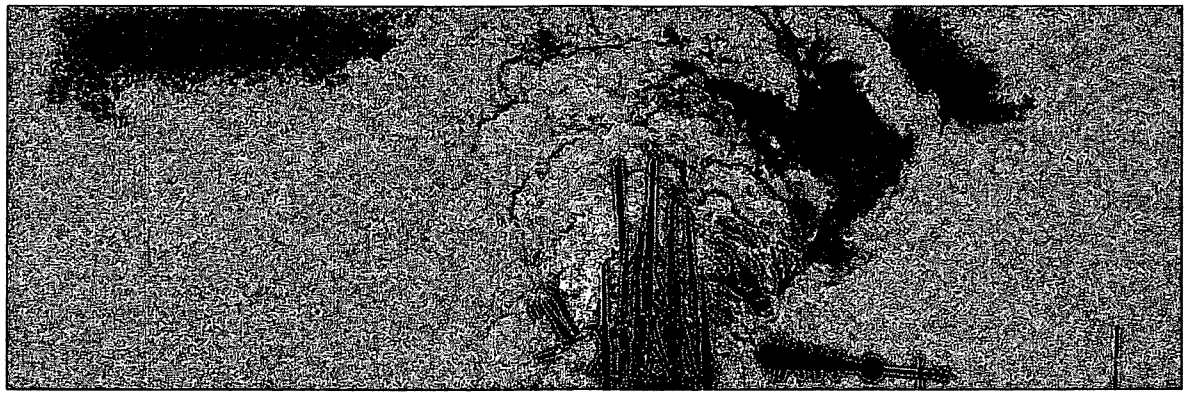
The storyboards suggest that Serco/CAI agents are using BBC scripts and Sweigert's split-tunnelling skills to break the chains of custody of evidence needed by the Secret Service to investigate cases of missing and exploited children (JonBenet Ramsey, Madeleine McCann!) and dismantle a patent-for-rent murder-for-hire network run by EVL Teachers who appear to have staged pig-farm raves between '96 and '01 where victims were shot with patented biological bullets before a spot-fixed dead-pool tortured death.

Internet URL: https://www.patreon.com/posts/ai-sercos-wtc-26194563

EXHIBIT FIVE-A

Apr 16 at 4:45pm

Serco's Al Con Air Rothschild Patents—Sweigert's EVL Teachers Dead Pool Tunnels—CAI Spot Fixed Spire And Towers: With David Hawkins Discovery CSI



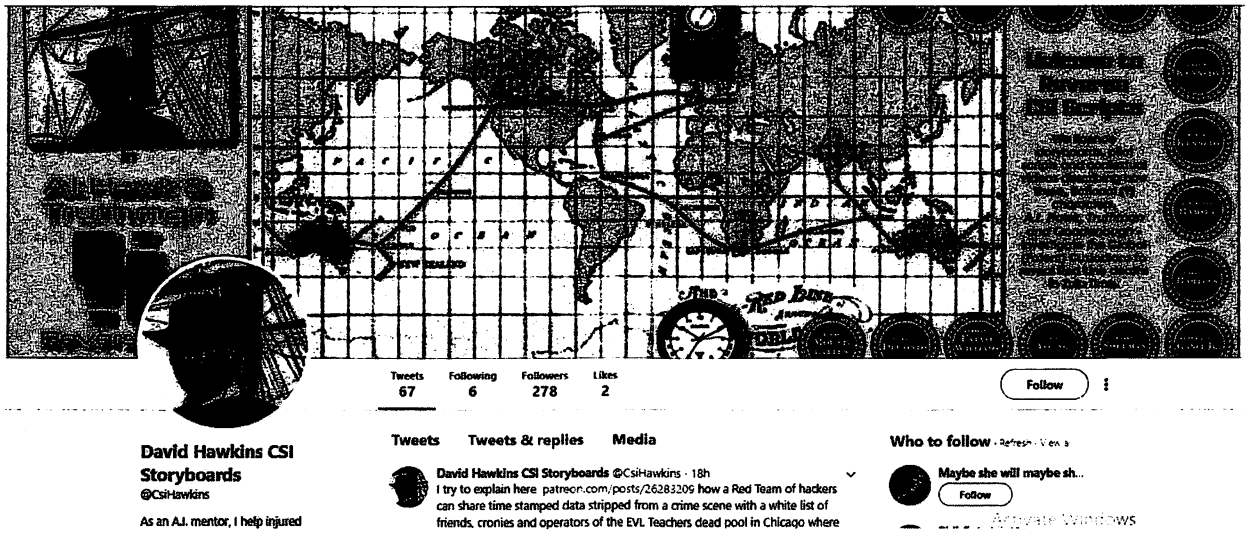
The story boards indicate that Serco agent Sweigert and Maxar Technologies director Joanne Isham, formerly responsible to Clinton's disgraced CIA Director John Deutsch for clandestine technical activities with the UK MOD over the federal bridge certification authority, equipped BBC scriptwriters and the EVL Al Teachers community with split-tunnel networks to prevent the Secret Service from investigating CAI special investors such as David Johnston, former Governor General of Canada and the only non-American citizen to chair the Harvard Board of Overseers, and the late General Alexander Haig former SACEUR and former director of MGM Mirage, who allegedly conspired with Bernardine Dohrn and Bill Ayers to complete on 9/11 what they started in the 1970s.

The storyboards indicate that Serco and CAI investors used Maxar and Sweigert to split tunnels for B.C.'s Piggy Palace Good Times Society and Starnet Communications and conceal Con Air pig-farm snuff film, child porn, blackmail, money laundering and dead-pool operations to help the BBC's EVL Teachers' friends including Obamas, Clintons, Dohrn & Ayers to spin Bin Laden propaganda through 9/11.

The storyboards suggest that Serco/CAI agents are using BBC scripts and Sweigert's split-tunnelling skills to break the chains of custody of evidence needed by the Secret Service to investigate cases of missing and exploited children (JonBenet Ramsey, Madeleine McCann!) and dismantle a patent-for-rent murder-for-hire network run by EVL Teachers who appear to have staged pig-farm raves between '96 and '01 where victims were shot with patented biological bullets before a spot-fixed dead-pool tortured death.

Internet URL: https://www.patreon.com/posts/26147959

EXHIBIT FIVE-B



Tweets **Tweets & replies** **Media**

David Hawkins CSI Storyboards @CsiHawkins · 18h

I try to explain here patreon.com/posts/26283209 how a Red Team of hackers can share time stamped data stripped from a crime scene with a white list of friends, cronies and operators of the EVL Teachers dead pool in Chicago where everyone profits except the carbon-spewing victims.

Serco's AI Patents For [redacted] Red Team Tunnels—Bin Laden AWA...

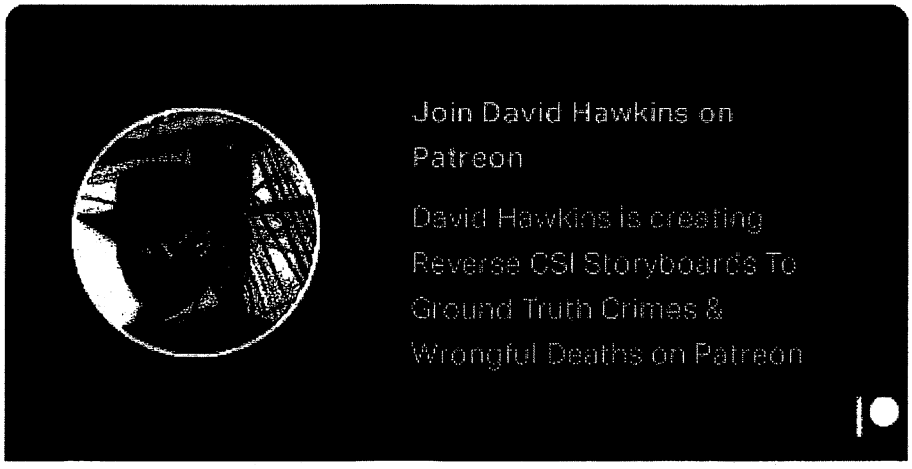
Official Post from David Hawkins: With nearly 40 years' experience as an AI mentor, I have used my Reverse CSI Storyboards to recognize Serco's ap...

patreon.com

3 3

David Hawkins CSI Storyboards @CsiHawkins · Apr 20

Today's post at patreon.com/posts/26242661 gives us the opportunity to link a [redacted] red team, Mueller's FBI colleagues, Hillary Clinton's EVL-networked Teachers and the CAI/CIA Private Equity Group to the dead-pool attack on WTC1 (North Tower) on 9/11. The net is closing!



Did [redacted] Red Team Tunnel Boeing Serco's AI Patents For WTC E...

Official Post from David Hawkins: With nearly 40 years' experience as an AI mentor, I have used my Reverse CSI Storyboards to recognize the air fo...

patreon.com

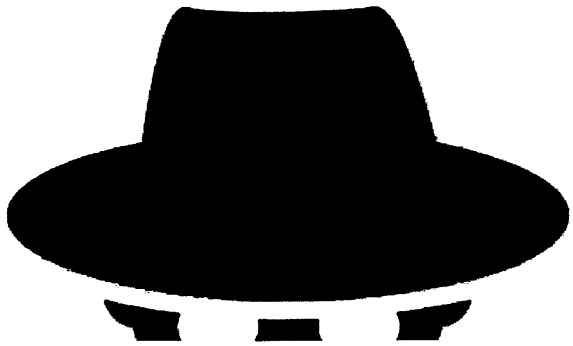
5 8

Internet URL: https://twitter.com/csihawkins

EXHIBIT SIX-A

Apr 14 at 5:31pm

Serco's Con Air Resilience With Sweigert Cut-Outs—BBC/EVL AI Teachers Scrubbing Tunnels—CAI's SPAWAR Secret Service Dirty Bomb: With David Hawkins Discovery CSI



With nearly 40 years' experience as an AI mentor, I have used my Reverse CSI Storyboards to identify the Serco shareholders—including an EVL-network of AI Teachers—Resilience actors and investment banker N M Rothschild & Sons Ltd., with custody of Con Air AI patented devices apparently used by Serco cut-out agents allegedly including social engineer/ethical hacker David Sweigert and his brother George Sweigert to scrub data from the EVL Teachers' tunnels under the federal bridge certification authority; infiltrate saboteurs into the U.S. Navy's Space and Naval Warfare Systems Command (SPAWAR); stop the US Secret Service from recognizing BBC fake news injects in the dirty bomb hoax which shut down parts of the Port Of Charleston in 2017 and split Eduroam data flows linked to Starnet child pornography, dead-pool betting, network intrusions, IP crimes and murder-for-hire between...

The story boards indicate that Serco agent Sweigert and Maxar Technologies director Joanne Isham, formerly responsible to Clinton's disgraced CIA Director John Deutsch for clandestine technical activities with the UK MOD over the federal bridge certification authority, equipped BBC scriptwriters and the EVL AI Teachers community with split-tunnel networks to prevent the Secret Service from investigating CAI special investors such as David Johnston, former Governor General of Canada and the only non-American citizen to chair the Harvard Board of Overseers, and the late General Alexander Haig former SACEUR and former director of MGM Mirage, who allegedly conspired with Bernardine Dohrn and Bill Ayers to complete on 9/11 what they started in the 1970s.

The storyboards indicate that Serco and CAI investors used Maxar and Sweigert to split tunnels for B.C.'s Piggy Palace Good Times Society and Starnet Communications and conceal Con Air pig-farm snuff film, child porn, blackmail, money laundering and dead-pool operations to help the BBC's EVL Teachers' friends including Obamas, Clintons, Dohrn & Ayers to spin Bin Laden propaganda through 9/11.

The storyboards suggest that Serco/CAI agents are using BBC scripts and Sweigert's split-tunnelling skills to break the chains of custody of evidence needed by the Secret Service to investigate cases of missing and exploited children (JonBenet Ramsey, Madeleine McCann!) and dismantle a patent-for-rent murder-for-hire network run by EVL Teachers who appear to have staged pig-farm raves between '96 and '01 where victims were shot with patented biological bullets before a spot-fixed dead-pool tortured death.

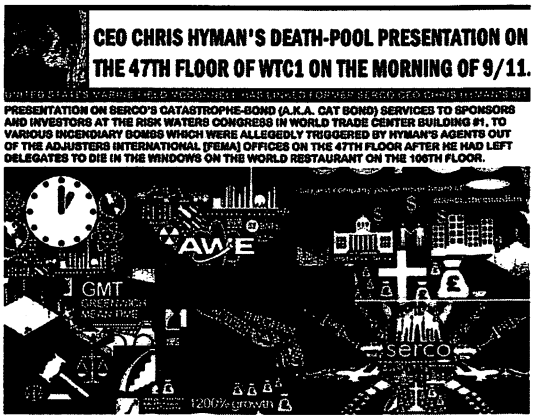
Internet URL: https://www.patreon.com/posts/sercos-con-air-26101401

EXHIBIT SIX-B

PATREON | Create on Patreon Explore creators Sign up

Apr 22 at 5:11pm

Serco's AI Patents For Sweigert Red Team Tunnels—Bin Laden AWACS Data—EVL Teachers Dead Pool: With David Hawkins Discovery CSI



David Hawkins

Become a patron

TIER BENEFITS

RECENT POSTS

Intervenor-applicant D. George Sweigert

With nearly 40 years' experience as an AI mentor, I have used my Reverse CSI Storyboards to recognize Serco's apparent use of AI algorithms to process the patented devices and systems which allegedly gave air force veteran and ethical hackers' Red Team leader David Sweigert the capability of split tunneling data where the Bin Laden group was able to access AWACS time-stamped ad hoc way points needed to knock out targets in New York and Washington while Serco shareholders—including an EVL-network of AI Teachers—and Resilience actors met with investment banker N M Rothschild & Sons Ltd and the CAI/CIA (?) Private Equity Group on the 47th Floor of WTC1 to spot fix the times and precise locations of a series of dead-pool crashes on 9/11.

Via social media, I have notified Serco shareholders, CAI investors and Sweigert's Red Teams that, in events associated with what Dr. Thomas Barnett described as *the first live broadcast mass snuff film in human history,* that their apparently negligent use of patented tunnelling devices has broken the chain of custody of data needed by the U.S. Secret Service to investigate the 9/11 attacks and a red-team conspiracy to 'scrub' websites owned by the private investigators who have connected the EVL Teachers to an Eduroam patent-for-rent murder-for-hire network and time-stamped data sold (?) by Serco operators of the NPL cesium clock.

"Mr. David Sweigert, managing director of EuroSignCard S.A., is an expert in digital signatures, e-commerce security, hacking, intrusion, public key infrastructures, security, banking, EURO, European Directive 1999/93 on Digital Signatures. *Sweigert consulted to the State of New York [where H. Clinton served as Junior Senator Jan 3, 2001 - Jan 21, 2009] on the implementation of their digital signature law. Sweigert also spent two years under contract to the NSA as a representative to the Federal Public Key Infrastructure Technical Working group (PKI provides the technical underpinnings for digital signatures)."*

The storyboards indicate that Serco/CAI agents hired Sweigert and Maxar Technologies director Joanne Isham, formerly responsible to Clinton's disgraced CIA Director John Deutsch for clandestine technical activities with the UK MOD over the federal bridge certification authority, and Maureen Baginski, VP Intelligence & Technical Advisory Services Senior National Security Advisor for Serco North America and former NSA Signals Intelligence (SIGINT) Director (WTF?), to equip BBC scriptwriters and the EVL AI Teachers with split-tunnel networks to strip out time-stamped crime-scene data and prevent the USSS from investigating a series of dead-pool attacks designed to complete on 9/11 what Bernardine Dohrn and Bill Ayers started in the 1970s.

The storyboards indicate that the late Victor Rothschild (a WWII bomb-disposal expert and the 1976 chair of the Royal Commission on Gambling) and two Rothschild alumni, U.S. Commerce Secretary Wilbur Ross and French President Emmanuel Macron—a former young leader with Hillary and Bill Clinton of the AXA-funded French American Foundation—played key roles in establishing the current dead-pool business model for Serco (formerly RCA GB 1929) and its shareholder Teachers pension funds (TIAA+USS = over $1.2 trillion AUM) which appear to link the spot-fixed crash of Pan Am 103 over Lockerbie in Scotland in 1988 to the alleged incendiary attack on the WTC towers, the Deepwater Horizon rig and the Notre Dame spire.

I note that Mr. Sweigert ran classified network projects for Booz Allen & Hamilton—alleged outsourcer with Serco Resilience and EVL Teachers for spot fixed body counts and population controls during a 9/11 TOPOFF exercise—which he claimed to have completed two computer forensic projects for the US Secret Service.

Internet URL: https://www.patreon.com/posts/26283209

EXHIBIT SIX-C

Oct 22, 2018 at 11:54pm

David Hawkins trademarks Bridge of Pride™ and Bridge of Fraud™

Oct 22, 2018 at 11:54pm

David Hawkins trademarks Bridge of Pride™ and Bridge of Fraud™

With this post, and after previously trademarking "Bridge of P.R.E.Y.", David "Sherlock" Hawkins is trademarking Bridge of Pride™ and Bridge of Fraud™ to better classify his creative work on reverse CSI storyboards and associated audio-visual scripts where David attempts to identify the mens rea of the perpetrators who may have used SIGINT over the Federal Bridge Certification Authority (FBCA) network or its antecedents to coordinate the weapons of 9/11; HUMINT from DOJ Pride and its antecedent organisations such as the Instrument Room (Imperial Brain) of the General Post Office to coordinate the torture killing of JonBenet Ramsey in 1996 and the Whitechapel murders attributed to "Jack the Ripper" in 1888, and $Intelligence to coordinate the "Double Occurrence" Twin Towers insurance fraud of 2001

Hawkins CSI storyboards and scripts make regular use of the methods described in Jerome Lemelson's "*Prisoner tracking and warning system and corresponding methods 2000-04-25 US6054928A Grant*" and the DOJ's Joint Automated Booking System (JABS) developed by Nortel Networks where prisoners are rewarded for spot fixing the time of high-value-target deaths or body counts at mass casualty events.

Herebelow is an example of a post title which should be self-explanatory given that representatives of the British, Saudi Arabian and Singaporean governments met fellow Serco shareholders on the 47th Floor of WTC 1 on the morning of 9/11 and appear to have reason to believe the probably-late Jamal Khashoggi was about to expose the role of federal bridge operators in the death of Princess Diana in 1997 and the DOJ blackmail ring which may have trapped Bill Clinton on Jeffrey Epstein's Lolita Express.

Internet URL: https://www.patreon.com/posts/david-hawkins-of-22231768

EXHIBIT SEVEN

THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

CLOSED

Federal Trade Commission, **Plaintiff,** **v.** **Wyndham Worldwide Corporation, *et al.*,** **Defendants.**	**CIVIL ACTION NO.** **2:13-CV-01887-ES-JAD** **STIPULATED ORDER FOR INJUNCTION**

Plaintiff, the Federal Trade Commission ("Commission"), filed its Complaint for Injunctive and Other Equitable Relief, subsequently amended as First Amended Complaint for Injunctive and Other Equitable Relief ("Complaint"), for a permanent injunction, and other

Intervenor-applicant D. George Sweigert

3. **certify that the Assessment was conducted by a qualified, objective, independent third-party professional, who uses procedures and standards generally accepted in the profession, adheres to professional and business ethics, performs all duties objectively, and is free from any conflicts of interest that might compromise the assessor's independent judgment in performing Assessments. Professionals qualified to prepare Assessments shall be: a person qualified as a Certified Information Systems Security Professional (CISSP) or as a Certified Information Systems Auditor (CISA); a person holding Global Information Assurance Certification (GIAC) from the SysAdmin, Audit, Network, Security (SANS) Institute; a Qualified Security Assessor under PCI DSS (QSA); or, at the election of Hotels and Resorts, a similarly qualified person or organization approved by the Associate Director for Enforcement, Bureau of Consumer Protection, Federal Trade Commission.**

SO ORDERED this 11th day of December, 2018.

Dismissed with prejudice as settled. JES

Hon. Esther Salas, U.S.D.J.

Intervenor-applicant D. George Sweigert

EXHIBIT EIGHT

National Science Foundation
WHERE DISCOVERIES BEGIN

SEARCH

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How to Manage Your Award

Grant Policy Manual
Grant General Conditions
Cooperative Agreement Conditions
Special Conditions
Federal Demonstration Partnership
Policy Office Website

Award Abstract #0448499

CAREER: Effective Trust Judgments Across Boundaries

NSF Org:	CNS Division Of Computer and Network Systems
Initial Amendment Date:	January 10, 2005
Latest Amendment Date:	January 10, 2005
Award Number:	0448499
Award Instrument:	Standard Grant
Program Manager:	George Kesidis CNS Division Of Computer and Network Systems CSE Direct For Computer & Info Scie & Enginr
Start Date:	July 1, 2005
End Date:	September 30, 2011 (Estimated)
Awarded Amount to Date:	$400,000.00
Investigator(s):	Sean Smith sws@cs.dartmouth.edu (Principal Investigator)
Sponsor:	Dartmouth College OFFICE OF SPONSORED PROJECTS HANOVER, NH 03755-1404 (603)646-3007

NSF Program(s):	ADVANCED NET INFRA & RSCH
Program Reference Code(s):	1045, 7254, 9217, HPCC
Program Element Code(s):	4090

ABSTRACT

Increasingly important social processes are migrating to an increasingly decentralized, inter-organizational information infrastructure. This work investigates the resulting trust issues. Are there grounds for one entity, Alice, to trust a remote entity Bob, with a particular task? When such grounds exist, how can this information be securely transmitted across the boundaries that separate Bob from Alice? Do Alice's applications and tools enable her to make the appropriate trust judgment?

This research begins with the technology of public key infrastructure (PKI), because it can communicate assertions without sharing secrets, and trusted computing platforms, because of they can potentially create islands of trust within a distributed infrastructure. The research will catalog archetypical examples of mismatches between current technology and human trust requirements, designe a series of experimental systems that seek to eliminate these mismatches, build the strongest design candidates, validate these designs in real pilot systems, and formalize the resulting design criteria. By creating a framework that ties PKI and trusted computing to the core problem of human trust, this project will advance understanding of the technology necessary to support trust and hasten the realization of that trustworthiness in our society's information infrastructure.

PUBLICATIONS PRODUCED AS A RESULT OF THIS RESEARCH

Note: *When clicking on a Digital Object Identifier (DOI) number, you will be taken to an external site maintained by the publisher. Some full text articles may not yet be available without a charge during the embargo (administrative interval).*

Some links on this page may take you to non-federal websites. Their policies may differ from this site.

(Showing: 1 - 10 of 18) Show All

Sara Sinclair and Sean Smith. "PorKI: Making User PKI Safe on Machines of Heterogeneous Trustworthiness," *21st Annual Computer Security Applications Conference*, 2005, p. 419.

Sara Sinclair, Sean Smith. "The TIPPI Point: Towards Trustworthy Interfaces.," *IEEE Security and Privacy*, v.3(4), 2005, p. 68.

Internet URL: https://www.nsf.gov/awardsearch/showAward?AWD_ID=0448499

EXHIBIT NINE

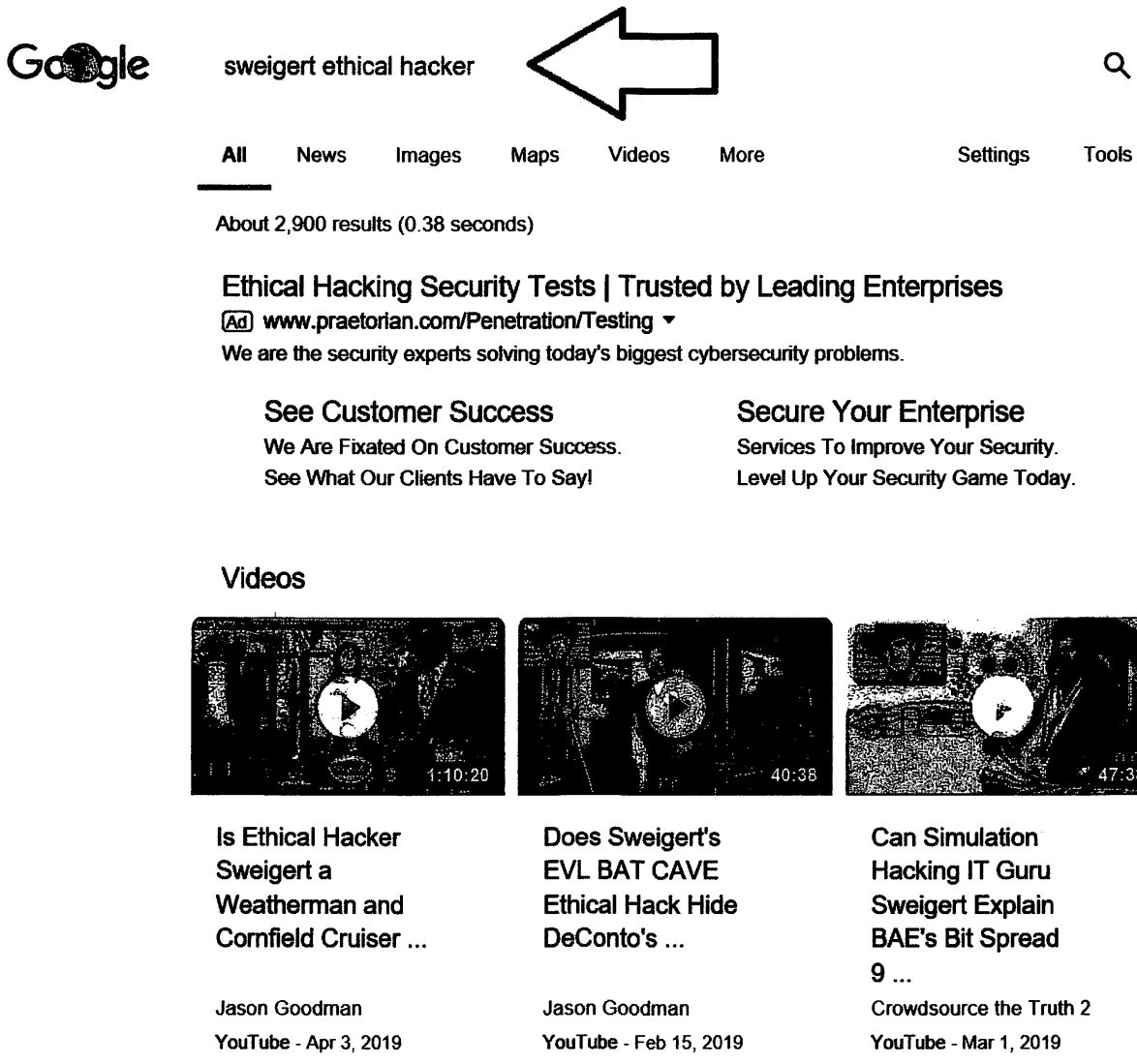
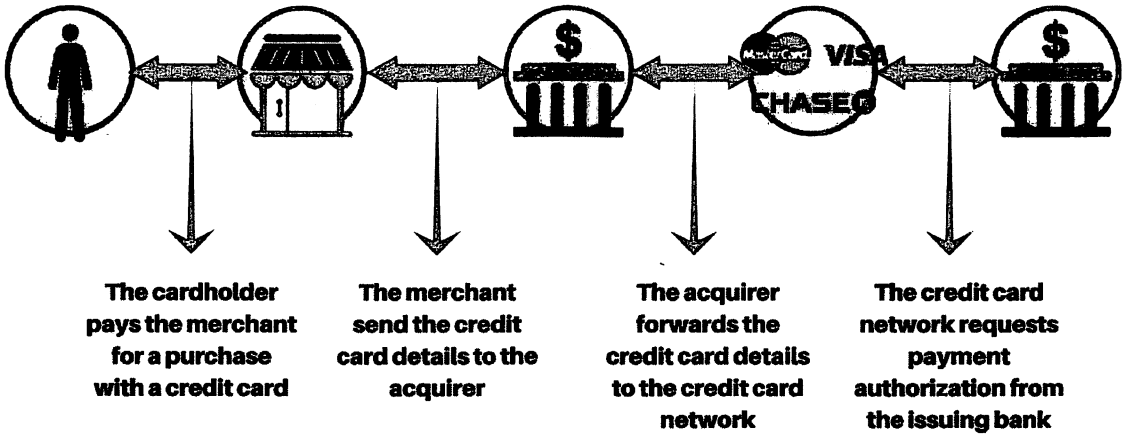
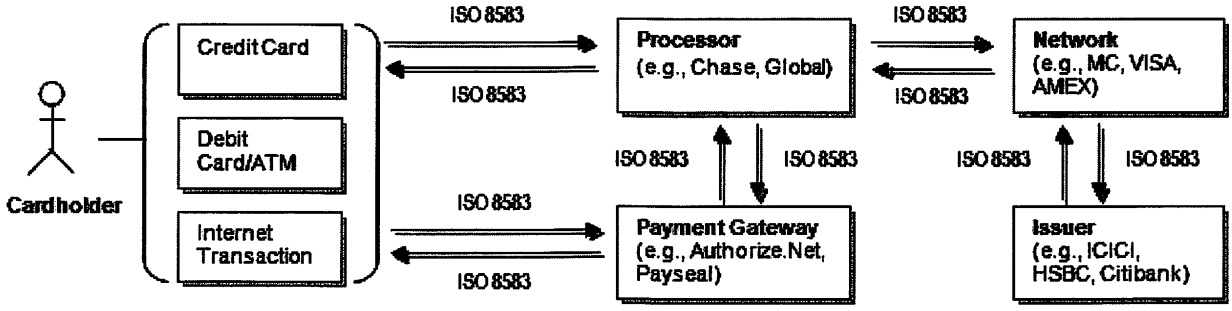


EXHIBIT TEN-A

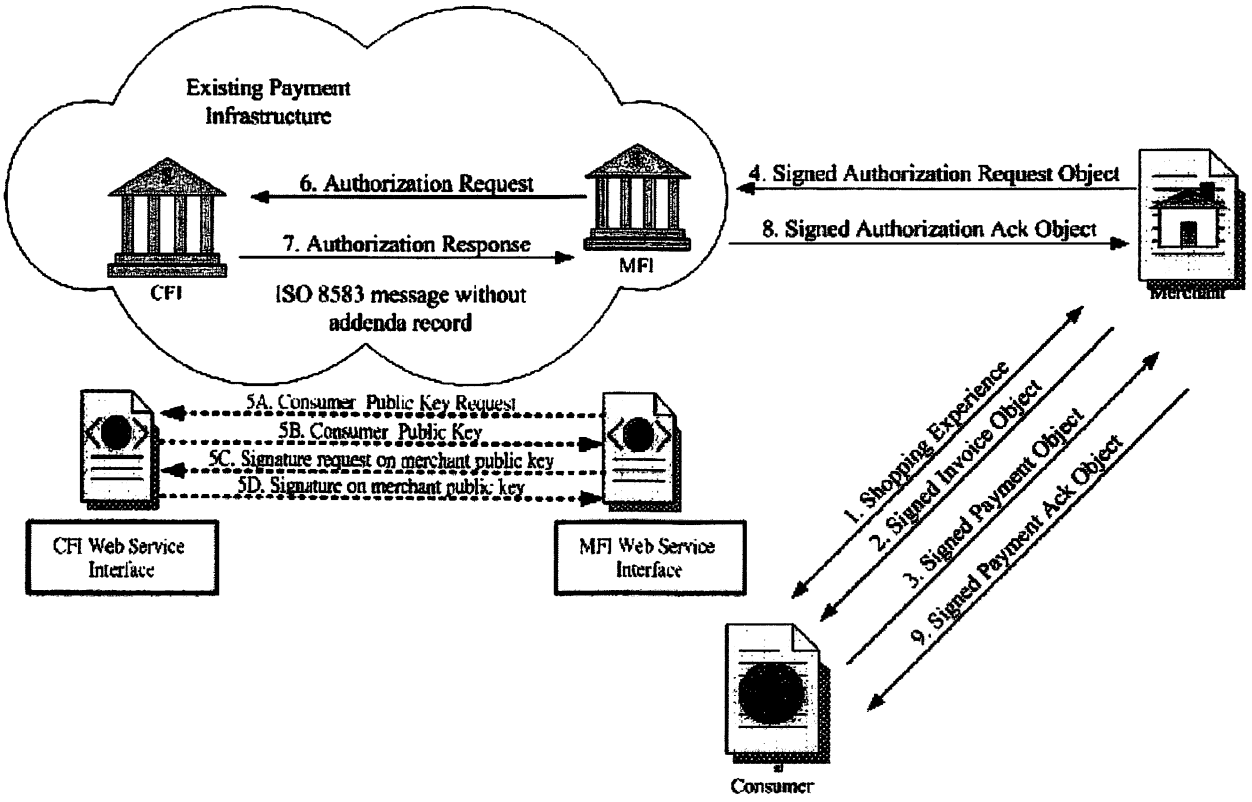
AUTHORIZATION



Internet URL: http://www.centurionpaymentservices.com/how-credit-card-processing-works/



Internet URL: https://www.codeproject.com/Articles/100084/Introduction-to-ISO



https://www.researchgate.net/figure/The-payment-flow-defined-in-ESCPS_fig2_4255581

EXHIBIT TEN-B

Acceptance of Digital Signatures: A Matter of Trust

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ABSTRACT

Trust between two entities is necessary before digital signatures techniques can be implemented. The US Federal Government has developed a "bridge" architecture to extend trust beyond a single trust domain. In sharp contrast to the bridge architecture exists the "end user" trust model. Both methods can be used to exchange digital signatures, however, the process to obtain Federal Bridge status is much more rigorous. This paper will explore the legality of digital signatures, the foundations of trust and processes and technologies to implement them. Evaluation techniques will be used to compare the two methods and the paper will conclude with a recommendation as to why the bridge method is the best choice for a large corporation.

1. INTRODUCTION

The promise of digital signatures in the ebusiness era was great, yet in 2005 digitally signing contract documents between two separate company domains has not been prolific. The main issue at hand is a matter of trust.

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the only viable solution at a large corporation is the Federal Bridge solution.

1.1 Reasons for Slow Adoption

There are many reasons for slow-moving adoption of digital signatures, and the reasons vary by company. Some may be political, some may be technical or cost related, but they all point to the issue of establishing trust between two domains.

Multimillion-dollar business-to-business (B2B) transactions and highly sensitive company documents are traveling across the Internet, a public network. The sensitivity of these communications makes ensuring the authenticity, integrity, and confidentiality of the transactions extremely important.

A digital signature is considered reliable when it has been issued by a trusted certificate authority (CA), authenticates the sender, guarantees the message integrity, and ensures non-repudiation of the message. A weakness and major concern of using digital signatures involves the notion that digital signatures can properly assure a person's identification over the Internet. Digital signatures alone cannot identify people. Digital signatures only assure to the recipient that a particular identification process was completed. [2]

Besides proving identity, a Public Key Infrastructure (PKI) is

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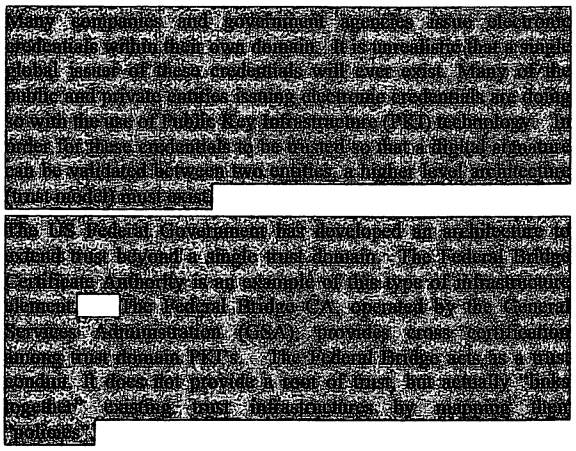

A second method based on the "End user" trust model, is much simpler to implement than the Federal Bridge. The simplicity of this model, leads us to ask the question: Why isn't this level of trust *good enough* for digitally signing documents and solving the trust problem?

Solving this problem requires a full understanding of the legality of digital signatures and the available options. A discussion of the foundations of trust will explore its properties, types, models, and evaluation techniques.

The Bridge solution is decomposed into the efforts involved in developing Certificate Polices and Practices, the Root Key generation event, the Federal Bridge certification methodology and the Bridge architecture components.

By comparing the Adobe/Entrust and Federal Bridge solutions signatures alone cannot identify people. Digital signatures only assure to the recipient that a particular identification process was completed. [2]

Besides proving identity, a Public Key Infrastructure (PKI) is seen as the technology that provides trust on the Internet. Building trust in the confidentiality of Internet transactions is one of the most important and yet most challenging issues in business. The primary component of a PKI service is the CA. The CA can be seen as the trusted third party in a PKI. It is responsible for creating, distributing, and revoking digital certificates.

A certificate binds a public-key value to a person, computer, or entity via a process called certification. CA's are organized in a hierarchy in which each parent CA signs a certificate vouching for a subordinate CA's public key. The verification process starts with a user's certificate and proceeds upward via the certificate path until a higher-level CA can verify a certificate. [2]

A certification path is a chain of certificates. The chain starts from the public key of CA trusted by the verifier. Each certificate in the certification path is signed by its predecessor's key. A relying party verifies a signature by successively verifying the signatures on the certificates in the path. The certification path is the essential architectural construct of a PKI. The main problem at hand comes when companies want to communicate with one another via the use of PKI for authentication and trust. Ensuring the interoperability of multi-vendor PKI environments is another issue to building trust in online business transactions. The trust dilemma and the associated business implications surrounding the CA's business model are the most significant issues in the digital signature arena today.

1.2 Legality of Digital Signatures

Generally, a signature may not be denied legal effect solely

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Many companies and government agencies issue electronic credentials within their own domain. It is unrealistic that a single global issuer of these credentials will ever exist. Many of the public and private entities issuing electronic credentials are doing so with the use of Public Key Infrastructure (PKI) technology. In order for these credentials to be trusted so that a digital signature can be validated between two entities, a higher level architecture (trust model) must exist.

The US Federal Government has developed an architecture to extend trust beyond a single trust domain. The Federal Bridge Certificate Authority is an example of this type of infrastructure element. The Federal Bridge CA, operated by the General Services Administration (GSA), provides cross certification among trust domain PKI's. The Federal Bridge acts as a trust conduit. It does not provide a root of trust, but actually "links together" existing trust infrastructures by mapping their "policies".

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